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10/610,499	06/30/2003	Andrew J. Bradbury	11836.0690.CPUS00	5361

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EXAMINER

FEELY, MICHAEL J

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/610,499

Applicant(s)

BRADBURY ET AL.

Examiner

Michael J. Feely

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-18 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11, 13-17 and 21-24 is/are rejected.
- 7) ☒ Claim(s) 14-18, 23 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Pending Claims*

Claims 1-11, 13-18, and 21-24 are pending.

### *Election/Restrictions*

1. Applicant's election without traverse of Group II (claims 11 and 13-24) in the reply filed on February 28, 2006 is acknowledged.
2. Claims 1-10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on February 28, 2006.

### *Priority*

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
4. The Examiner's previous comments regarding the priority date, with respect to the CIP application is withdrawn. The parent applications, including the foreign priority document, provide support for, "the same process of grinding can be carried out by substituting an oleaginous (oil) based fluid for the aqueous based fluid - *see: column 3, lines 45-52 of US 6,586,372; and the paragraphs bridging pages 4-5 of the foreign priority document.*
5. After further review of the instant application and the parent application(s) (US 6,586,372), it has been determined that the entire scope of the instant invention is not supported in the parent document(s). The parent document(s) require that the dispersed colloidal particles

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have a weight average particle diameter ( $d_{50}$ ) of less than 2  $\mu\text{m}$  – *see: column 2, lines 41-50 and claims 1-6 of US 6,586,372; and pages 3-5 and claims 1-14 of the foreign priority document.*

The instant invention is open to particles of any weight average particle diameter ( $d_{50}$ ).

Hence, Applicant is entitled to an effective filing date of July 16, 1997 (foreign priority date of July 24, 1996) for embodiments of their invention that feature a weight average particle ( $d_{50}$ ) of less than 2  $\mu\text{m}$ . Embodiments featuring particles outside this range are entitled to an effective filing date of June 30, 2003.

#### ***Oath/Declaration***

6. The new oath or declaration is no longer defective.

#### ***Specification***

7. The objection to the abstract has been overcome by amendment.

#### ***Claim Objections***

8. The previous objection to claim 14 has been overcome by amendment.
9. Claims 14-18, 23, and 24 are objected to because of the following informalities: claims 14-17 are dependent from cancelled claim 12. Claim 18 is objected to because it is dependent from claim 17. Claims 23 and 24 are objected to because they are dependent from claim 14. Appropriate correction is required.

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***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. The rejection of claims 19 and 20 under 35 U.S.C. 112, second paragraph, has been rendered moot by the cancellation of these claims.

***Terminal Disclaimer***

12. The terminal disclaimer filed on February 28, 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on pending application number 10/274,528 has been reviewed and is accepted.

The terminal disclaimer has been recorded.

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

14. The rejection of claim 12 under 35 U.S.C. 102(b) as being anticipated by Groves (US Pat. No. 3,065,172) has been rendered moot by the cancellation of claim 12.

15. The rejection of claims 11, 16, and 22 under 35 U.S.C. 102(b) as being anticipated by Groves (US Pat. No. 3,065,172) has been withdrawn.

16. The rejection of claims 11, 21, and 22 under 35 U.S.C. 102(b) as being anticipated by Falcon-Steward (US Pat. No. 4,166,582) has been overcome by amendment.

17. The rejection of claims 11 and 22 under 35 U.S.C. 102(b) as being anticipated by Lillmars (US Pat. No. 5,307,938) has been overcome by amendment.

18. The rejection of claim 12 under 35 U.S.C. 102(b) as being anticipated by Buchanan et al. (US H987) has been rendered moot by the cancellation of claim 12.

19. The rejection of claims 11, 15, and 16 under 35 U.S.C. 102(b) as being anticipated by Buchanan et al. (US H987) stands for the reasons of record (*see section 12 of the previous Office action*).

20. Claims 11, 13-17, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Bates et al. (US Pat. No. 6,380,136).

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Regarding claims 11, 13-17, and 21, Bates et al. disclose: **(11)** a method of making an additive *for increasing the density of a fluid* (inherently capable of doing this), the method comprising: comminuting a solid material and a dispersant in a liquid medium so as to produce colloidal particles coated with dispersant (Abstract; column 3, lines 5-13; column 9, lines 41-57), wherein the liquid medium is oleaginous (column 3, lines 5-13; column 9, lines 41-57); **(13)** wherein the liquid medium is an oleaginous liquid of kinematic viscosity less than 10 centistokes at 40°C and a flash point of greater than 60°C (*inherent*: column 3, lines 5-13; column 9, lines 41-57); **(14)** wherein the oleaginous fluid is selected from the group consisting of diesel oil, miner or white oils, n-alkanes, and synthetic oils (column 3, lines 5-13; column 9, lines 41-57); **(15)** wherein the dispersant is selected from carboxylic acids of molecular weight of at least 150 (column 5, line 58 through column 6, line 16); **(16)** wherein the dispersant is selected from *see claim for list* (column 3, line 25 through column 9, line 20); **(17)** wherein the dispersant is a polymeric acrylate ester (column 4, lines 57-61); and **(21)** wherein the comminuting of a solid material and a dispersant in a liquid medium is carried out in an agitated fluidized bed of particulate grinding material (column 3, lines 5-13; column 9, lines 41-57).

21. Claims 11, 13, 14, and 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Patel (US Pat. No. 6,806,233).

Regarding claims 11, 13, 14, and 21-24, Patel discloses: **(11)** a method of making an additive *for increasing the density of a fluid* (inherently capable of doing this), the method comprising: comminuting a solid material and a dispersant in a liquid medium so as to produce colloidal particles coated with dispersant (column 9, line 46 through column 10, line 21), wherein the liquid medium is oleaginous (column 9, line 46 through column 10, line 21); **(13)**

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wherein the liquid medium is an oleaginous liquid of kinematic viscosity less than 10 centistokes at 40°C and a flash point of greater than 60°C (*inherent*: column 4, lines 17-31); **(14)** wherein the oleaginous fluid is selected from the group consisting of diesel oil, miner or white oils, n-alkanes, and synthetic oils (column 4, lines 17-31); **(21)** wherein the comminuting of a solid material and a dispersant in a liquid medium is carried out in an agitated fluidized bed of particulate grinding material (column 9, line 46 through column 10, line 21); **(22)** wherein the solid is selected from the group consisting of *see claim for list (inherent in drill cuttings*: column 9, line 46 through column 10, line 21); **(23)** wherein the oleaginous fluid is a synthetic oil (column 4, lines 17-31); and **(24)** wherein the synthetic oil is selected from the group consisting of alpha-olefins oil, ester oils, and poly(alpha-olefins) (column 4, lines 17-31).

***Claim Rejections - 35 USC § 103***

22. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

23. The rejection of claims 11-14, 17, 19, and 20 under 35 U.S.C. 103(a) as being unpatentable over Groves (US Pat. No. 3,065,172) in view of GB 1,414,964, US 4,166,582 and/or WO 97/45625 has been withdrawn.

24. Claims 23 and 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Bates et al. (US Pat. No. 6,380,136) in view of Patel (US Pat. No. 6,806,233).

Regarding claims 23 and 24, Bates et al. disclose, “The wet-milling may be carried out in the presence of an oil, for example, diesel oil or kerosene;” (column 9, lines 53-54); however, they fail to explicitly disclose the synthetic oil set forth in claims 23 and 24.



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The teachings of Patel demonstrate that synthetic oils, along with diesel oil are equivalent oleaginous materials for oil-based grinding operations (column 4, lines 17-31; column 9, line 46 through column 10, line 12). In light of this, it has been found that the substitution of equivalents is *prima facie* obvious – see *MPEP 2144.06*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute diesel oil with synthetic oil, as taught by Patel, in the process of Bates et al. because Patel demonstrates that these oils are equivalent oleaginous materials for oil-based grinding operations.

#### ***Allowable Subject Matter***

25. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

26. Applicant's arguments, see pages 9-11 of the response, filed February 28, 2006, with respect to Groves (US Pat. No. 3,065,172) have been fully considered and are persuasive. The prior art rejections over Groves have been withdrawn.

27. Applicant's arguments, see page 12 of the response, filed February 28, 2006, with respect to Buchanan et al. (US H987) have been fully considered but they are not persuasive. Although there is a pre-grinding step, the wet de-agglomeration step falls within the scope of the instant

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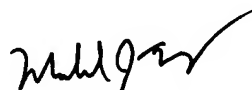
claims. The de-agglomeration step reduces the particle size by breaking agglomerates into individual particles; hence, comminuting does indeed take place.

*Communication*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael J. Feely  
Primary Examiner  
Art Unit 1712

July 7, 2006

**MICHAEL FEELY**  
**PRIMARY EXAMINER**